

Asteroid search observations in the Bisei Spaceguard Center

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<http://www.spaceguard.or.jp/ja/index.html>

The HAYABUSA spacecraft reached near the asteroid ITOKAWA and made detailed scientific observations. It also made a landing on ITOKAWA and succeeded in its sample collection. A lot of new scientific results are expected to be derived.

For the future, it is necessary to prepare abundant databases of small bodies in order to accomplish effectively the plan of the penetrator mission to primordial bodies in the current solar system. It is important to advance the ground-based search observation for near-earth objects (NEOs), main-belt asteroid, and Edgeworth Kuiper-belt objects (EKBOs) for that purpose. In particular, it is important to understand the orbits of more near-earth asteroids (NEAs) in making the missions succeeding to the HAYABUSA be successful. Therefore, it is necessary to observe for the search of NEAs and for their orbit decision.

Since 2000, the start of the Bisei Spaceguard Center, we have carried out optical observations for not only the orbit decision of the satellites and space debris, but the search of NEOs, including NEAs, under a collaboration with JAXA (formerly NASDA). We discovered the second bright Apollo-type asteroid 2000UV13. In addition, we have also discovered 78 newly numbered asteroids. Moreover, we are executing various improvements in our observation system, to obtain the further results in addition.

Here, we introduce the activity of the Japan Spaceguard Association, which carries mainly out optical observations at the Bisei Spaceguard Center.